

PART I - ADMINISTRATIVE

Section 1. General administrative information

Title of project	
Enhance and protect habitat and riparian areas on the DVIR	
BPA project number	9701100
Contract renewal date (mm/yyyy)	04/00
Multiple actions? (indicate Yes or No)	yes
Business name of agency, institution or organization requesting funding Shoshone-Paiute Tribes of the Duck Valley Indian Reservation	
Business acronym (if appropriate)	Sho-Pai Tribes - DVIR
Proposal contact person or principal investigator:	
Name Mailing address City, ST Zip Phone Fax Email address	Guy Dodson Sr. P.O. Box 219 Owyhee Nevada 89832 208-759-3246 208-759-3248 dvirfg@aol.com
NPPC Program Measure Number(s) which this project addresses 2.1A1, 2.2A, 2.2H, 7.1B, 7.1C, 10.1E1, 10.2A.2, 10.8C2, 10.8C5	
FWS/NMFS Biological Opinion Number(s) which this project addresses FERC relicensing considerations of the Hells Canyon Complex relative to the 1999 FCRPS (Hydropower Operations) Biological Opinion, NMFS	
Other planning document references CBFWA-Resident Fish Managers (1997) Multi-year Implementation Plan Federal MOA on BPA Fish and Wildlife restoration funding Department of Energy/BPA Tribal Policy State of Idaho and State of Nevada Fish Management Plans affecting the Owyhee Basin Independent Scientific group (1996) Return to the River/ (1997) Review of Columbia Basin Fish and Wildlife Program NPPC Regional Multispecies Framework Project/Process/Documents Duck Valley Indian Reservation (DVIR) Natural Resources Plan Duck Valley Water Quality Standards (draft)	
Short description This project increases critical riparian areas of the Owyhee River and its tributaries as well as preserves the numerous natural springs located on the Duck Valley Indian Reservation. Provides a clean pure source of water for the fish and wildlife in the Owyhee and upper Snake	

river subbasins in accordance with the Northwest Power Planning Councils (NPPC) measures (10.8C.5)

Target species

Redband trout, Bull trout, introduced trout species (rainbow) for put and take fisheries; other resident trout species comprising the native community; anadromous salmonids (reintroduction/off site mitigation; all wildlife species.

Section 2. Sorting and evaluation

Subbasin

Owyhee

Evaluation Process Sort

CBFWA caucus		CBFWA eval. process		ISRP project type	
X one or more caucus		If your project fits either of these processes, X one or both		X one or more categories	
	Anadromous fish		Multi-year (milestone-based evaluation)		Watershed councils/model watersheds
X	Resident Fish		Watershed project eval.		Information dissemination
	Wildlife				Operation & maintenance
					New construction
				X	Research & monitoring
				X	Implementation & mgmt
					Wildlife habitat acquisitions

Section 3. Relationships to other Bonneville projects

Umbrella / sub-proposal relationships. List umbrella project first.

Project #	Project title/description
20536	Develop Management Plan & Assess Fish and Wildlife of the Owyhee Basin - DVIR

Other dependent or critically-related projects

Project #	Project title/description	Nature of relationship
9501500	Lake Billy Shaw Wetlands Catch and	A new BPA funded reservoir was

	Release Fishery O&M	completed in 1998 on the DVIR -- the development of its fisheries needs to be integrated within a comprehensive fish management plan.
8815600	Stocking Fish in Lakes and streams on the DVIR	Stocking of hatchery trout in reservoirs and streams has been implemented for many years to provide fisheries and economic benefits to the DVIR — this program needs to be re-evaluated & integrated in the rationale of a comprehensive fish management plan.
9500600	Shoshone-Bannock-Shoshone-Paiute Joint Culture Facility	A BPA funded fish culture facility is being developed to provide trout production to supplement fisheries on the DVIR and Fort Hall. Its operation should be coordinated with the comprehensive Owyhee Basin resident fish management plan.

Section 4. Objectives, tasks and schedules

Past accomplishments

Year	Accomplishment	Met biological objectives?
1997	Begin habitat assessments on DVIR	data collected and included in Annual Report
	Initiate fishery survey	data collected and included in Annual Report
	Purchase equipment to begin habitat work	
	Quarterly & Annual report	
1998	Begin habitat work on springs	yes - 6 springs fenced and repaired
	Continue habitat assessment and fishery survey	

Objectives and tasks

Obj 1,2,3 1	Objective	Task a,b,c a	Task
	Identify resident trout species and determine populations of fish and invertebrates		Snorkel surveys, electrofishing, to determine population estimates. Continue on streams not completed in 1999
		b	Survey fish and invertebrates

Obj 1,2,3	Objective	Task a,b,c	Task
2	Identify and protect spawning areas of streams with redband trout populations	a	Evaluate river and streams to determine spawning areas
		b	Protect (through fencing) and monitor spawning areas
3	Protect and repair natural springs	a	Prioritize springs for fencing
		b	Fence spring areas and install water troughs
		c	inventory stock water ponds and determine condition and costs for repair
		d	set maintenance schedule for fences, troughs, piping, and springs
4	Enhance river and stream habitat	a	Plant native grasses and trees on eroded areas of river and streams
		b	evaluate and monitor seeded areas for disturbance and regrowth

Objective schedules and costs

Obj #	Start date mm/yyyy	End date mm/yyyy	Measureable biological objective(s)	Milestone	FY2000 Cost %
1	04/2000	04/2001	Yes - population estimates of tributary streams, species composition, fish health		20
2	04/2000	04/2001	Yes - cooler water temps of redband spawning streams over 3 year period by 2 degrees		15
3	04/2000	04/2001	Yes - enhanced riparian areas around springs - increase water flow into streams	complete six spring developments	45
4	04/2000	04/2001	increase riparian area on protected streams by 50%		20
				Total	100

Schedule constraints

Possible ESA constraints for bull trout and redband trout.

Completion date

Section 5. Budget

FY99 project budget (BPA obligated):	\$293,000.00
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FY2000 budget by line item

Item	Note	% of total	FY2000 (\$)
Personnel	Director, Biologist, Technician	38%	\$110,000.00
Fringe benefits	@30% included in personnel		
Supplies, materials, non-expendable property	Fencing, pipe for water lines, water troughs, misc (trees, seed,), rental equipment	28%	\$80,000.00
Operations & maintenance		6%	\$20,000.00
Capital acquisitions or improvements (e.g. land, buildings, major equip.)		0%	
NEPA costs		0%	
Construction-related support		0%	
PIT tags	# of tags:	0%	
Travel	To attend mtgs. For project leader and director	2%	\$7,000.00
Indirect costs	@26.6%	20%	\$57,722.00
Subcontractor	consultant to aid in Unified Watershed Assessment (UWA) on DVIR	6%	\$20,000.00
Other			
TOTAL BPA REQUESTED BUDGET			\$294,722.00

Cost sharing

Organization	Item or service provided	% total project cost (incl. BPA)	Amount (\$)
Bureau of Indian Affairs Forestry - Phoenix Office	purchase of Native trees	7%	\$30,000.00
Rural Soil Conservation Service	Technical assistance	0	0.00
Total project cost (including BPA portion)			\$424,722.00

Outyear costs

	FY2001	FY02	FY03	FY04
Total budget	\$310,000.00	\$317,000.00	\$325,000.00	\$300,000.00

Section 6. References

Watershed?	Reference
	see umbrella proposal (ShopaiGD1.doc)

PART II - NARRATIVE

Section 7. Abstract

An overall description of *technical and scientific background* for the comprehensive fish and wildlife enhancement on the duck Valley Indian Reservation is provided in the “umbrella” proposal form - ShopaiGD1.doc The additional specific information relating the habitat protection and enhancement sub-proposal follows.

The Shoshone-Paiute Tribes of the Duck Valley Indian Reservation are currently in the second year of the Habitat Enhancement Project on the Reservation. The Goals are to protect and enhance the many natural springs (DVIR resource plan), Owyhee River, and its tributaries on the Reservation, and to develop a database that can be used by other fisheries professionals which includes information on water quality and fish composition, health, abundance, and genetic makeup. This project will aid all Columbia Basin Fish and Wildlife programs in helping to identify genetically pure strains of fish (as called for in the Council's measures) and provide for clean water flowing into the Snake River and Columbia River. One habitat portion of this project will focus on protecting the numerous springs that provide clean cool water to the Owyhee River. This will be accomplished through enclosure fences at the spring head and water troughs to provide wild and domestic stock access to drinking water. Monitoring of these areas includes water temperatures and water quality parameters of these springs. All data from this work will be included in the annual reports to BPA. The remaining portion of this project will focus on protecting and enhancing the Owyhee River and its tributaries by excluding domestic and wild stock from critical fish spawning areas, especially those streams with suspected populations of redband trout. This project is expected to last up to five years, once all areas are protected/enhanced the remaining time and money will focus on maintenance of these areas. The desired outcome of this project is to determine the populations and species of trout in the river and streams of the Reservation as well as to increase the natural reproduction of resident trout. It is the Tribes eventual goal to have a suitable habitat for anadromous fish to once again return to the Owyhee River basin. Yearly monitoring and evaluation will occur throughout the entirety of

this project to ensure that the project is achieving the desired goals. Also, new areas will be evaluated for protection and enhancement as the project continues.

Section 8. Project description

a. Technical and/or scientific background

The Duck Valley Indian Reservation is located in Idaho and Nevada. The Owyhee River enters the Reservation at the southeast corner in Nevada and exits in the northwest corner of the Reservation in Idaho, continuing into Oregon where it enters the Snake River. The surface water resources of the Reservation consists of the Owyhee River, two man-made lakes, over 350 miles of tributary streams, many fresh water stock ponds, and a man-made lake in the Billy Shaw slough completed in 1998.

The Habitat Enhancement project for the Duck Valley Indian Reservation is part of an on-going project begun in 1997 and funded by Bonneville Power Administration as substitution for the loss of resident fish habitat due to the construction of federal and non-federal hydroelectric dams on the Columbia and Snake Rivers. These dams resulted in the complete abolishment of anadromous fish and greatly disturbed the habitat for native resident fish from the Owyhee River and its tributaries on the Reservation. The loss adversely impacted our tribal treaty rights and natural resources, as well as negatively impacting our social, cultural, and economic resources on the Duck Valley Indian Reservation.

The project being proposed is to protect the near pristine natural resources of the Reservation. We propose to protect and enhance all natural springs on the Reservation. Also, we are proposing to protect the spawning areas of wild trout in the Owyhee River and its tributaries. There are known populations of redband trout (*Oncorhynchus mykiss gairdneri*) on the Reservation. The areas that are observed to have spawning trout (both redband trout and rainbow trout (*Oncorhynchus mykiss*)) will be fenced in order to protect these areas from getting trampled by the wild and domestic stock on the Reservation. The areas where fish are seen spawning, or observed during snorkel surveys, fences will be erected approximately 1/4 mile up and down stream of these areas on both shores and across the stream. The area will be flagged and fences will be left in place for future observation and to monitor the area for regrowth of riparian vegetation as well as use of the area by fishermen or wild game. There are over 200 springs and stock ponds with very few of them being protected from trampling by wild and domestic animals. These natural springs provide cool, clean water to the Owyhee River and in turn provide this same cool, clean water downstream to the lower Owyhee and Snake Rivers. Many of these springs currently are not flowing due to excessive use of the wild and domestic animals in these areas. The spring areas get trampled and compacted, eventually diverting the water away from these areas, thus destroying a clean source of water. We propose to fence these areas in order to keep animals from trampling the springs. A water trough will be provide outside the fenced area to provide water for the animals. Along with this spring protection, many windmills near these springs will be rehabilitated to pump this clean water to the troughs and to the river or stream below. This work was begun in 1998 with the department completing six springs. These springs will be included in the annual report to BPA. Along with this work we

will inventory and document other springs on the DVIR that need work completed on them. This work has also involved documenting the over 200 stock water ponds on the DVIR. These ponds are essential in keeping stock out of the streams and off the Owyhee River. The work for 2000 will include getting an outside contractor to look at these ponds and determine their condition as well as cost to repair ponds that have been destroyed through the years due to lack of maintenance. This is a fast, cost efficient solution to provide the Owyhee River, all its tributaries, and the rivers (Snake and Columbia) at least one clean, cool, source of water. The Shoshone-Paiute Tribes believe the best way to provide clean water downstream is to ensure that there is clean water upstream. This work is the most logical component of our goal for the Columbia Basin Ecosystem, which is to "protect, mitigate, and enhance fish and wildlife" in the Columbia River Basin. It is difficult to achieve these goals in the Columbia, Snake or any other river in Idaho, Oregon, or Washington without first having clean water entering these drainages.

b. Rationale and significance to Regional Programs

An overall description of *rationale and significance to regional programs* is provided in the "umbrella" proposal form - ShopaiGD1.doc.

2.1A1: Explore methods to assess trends in ecosystem health.

2.2A: Support native species in native habitats.

2.2H: The need to learn from implementation (M&E)

7.1B: Conserve genetic diversity

7.1C: Collection of population status, life history and other data on wild and naturally spawning populations

10.1E1: Implementation of identified resident fish projects by 2006

10.2A.2 Address potential impacts on resident fish, where such impacts exist, in developing basinwide guidelines to minimize genetic and ecological impacts of hatchery fish on wild and naturally spawning species as called for in measure 7.2A.1

10.8C.2 Review DVIR surface water and groundwater suitability for resident fish production facilities. Initiate a comprehensive genetic sampling program of the redband trout in the Owyhee Basin. Based on results of these studies, develop and implement strategies to protect wild redband trout populations from potential impacts caused by hatchery programs.

c. Relationships to other projects

An overall description of *relationships to other projects* is provided in the "umbrella" proposal form - ShopaiGD1.doc. The following BPA-funded projects are on-going during FY1999-2000 for resident fish mitigation and enhancement on the DVIR. Relationships of these ongoing projects with the proposed Habitat Enhancement project sub-proposal are summarized in the following section.

Project 9501500 "Lake Billy Shaw Wetlands Catch and Release Fishery O&M" [NPPC measure 10.8C, 10.8C4] A new BPA funded dam was completed in 1998 on the DVIR and Lake Billy Shaw will begin filling in 1999--The development of its fisheries needs to be integrated within a

comprehensive fish management plan that gives consideration to genetic diversity of native fish populations and over ecosystem biodiversity which includes habitat and water quality parameters.

Project 8815600 “Stocking fish in lakes and streams on the DVIR” [NPPC measure 10.8C1, 10.8C3] Trout stocking in the reservoirs and streams on the DVIR has been ongoing since 1988 and is required to provide partial mitigation for lost fish production and harvest for Tribal sustenance and income. We need to balance the needs of fishing opportunities for Tribal members and economic development on the DVIR, while maintaining genetic diversity of native trout populations.

Project 9500600 “Shoshone-Bannock/Shoshone-Paiute Joint Culture Facility” [NPPC measure 10.8C3, 10.8C6] A BPA funded fish culture facility is being developed to provide trout production to supplement fisheries on the DVIR and Fort Hall Reservations. Its operation should be coordinated with the comprehensive Owyhee Basin resident fish plan and the DVIR Unified Watershed Assessment. Including Lake Billy Shaw fishery development and conservation of genetic diversity of native trout populations.

d. Project history (for ongoing projects)

The project history of the Habitat Enhancement Project (#97011) for the Shoshone-Paiute Tribes is included in the form of quarterly reports to BPA as well as Annual reports to BPA. The project began in March of 1997. Thus far all work included in our Statement of Works has been completed on time according to our contract with BPA. In 1997 our project began with collection of preliminary data on the waters of the DVIR. We also began our assessment of the habitat conditions on the Reservation. This work included stream habitat surveys and surveying the numerous natural springs on the Reservation. During 1998 we continued our work in collecting data on both the habitat conditions and began data collection on the fisheries of the DVIR. This work will be available in our 1998 Annual Report. This work will include population estimates, water quality data, habitat conditions, and information on our spring developments. The history is as follows:

Quarterly and annual reports to BPA

Budget for FY97 \$645,000.00

Budget for FY98 \$240,000.00

Budget for FY99 \$290,000.00

Major results achieved to date include the beginning of compiled water quality data and habitat information of the Owyhee river and many of the tributaries to the river. We have also made improvements to both reservoirs by grading the roads and graveling the road areas in order to prevent erosion and sedimentation from entering these waters. Rip-rap has been added to the dike at Sheep Creek Reservoir to try and prevent further breaching of the dam. Some habitat enhancement has begun on the streams of the Reservation, especially streams with suspected populations of redband trout. Willows have been planted (Skull Creek, Mary’s Creek) on eroded banks and further work will continue in 1999. A monitoring schedule is in the process of being set to watch these areas for further degradation and improvements.

e. Proposal objectives

The overall goal of the Shoshone-Paiute Tribes “umbrella” (refer ShopaiGD1.doc) is to coordinate comprehensive Fish, Wildlife, and Habitat Restoration/protection Plan for the DVIR — including fish and wildlife management planning, fish stock assessment, and wildlife inventory of the Owyhee Basin, DVIR component. The specific objectives of this proposal are:

Objective 1: Identify resident trout on the Duck Valley Indian Reservation and determine populations of fish and invertebrates. **

This objective will be addressed first and with the most effort on Mary's Creek, Skull Creek, Fawn Creek, Miller Creek, and the Owyhee River. Time and weather permitting analysis will occur on other streams of the Reservation. Many of the streams do not have names but will be named with location descriptions upon fish collection. This work will be done through snorkel surveys, electrofishing and creel surveys.

The risks associated with this type of work are excessive mortalities to target and non-target fish species. These risks will be lessened by care of equipment and use by trained employees. Sample size, transportation, and collecting protocol is available at the HPFG office.

**This objective is dependant on the Stock assessment proposal. This will be part of that proposal if funded.

Objective 2: Identify and protect spawning areas

The river and streams of the Reservation will be evaluated and areas critical to the survival (spawning areas) of redband and rainbow trout will be fenced in order to prevent trampling of redds. These areas will be determined by the Biologist, Director, Elders, and possibly an outside contractor. Areas of severe degradation on the River and streams will be reseeded with native grasses, trees planted and fenced to help prevent further erosion and establish stable banks and riparian areas.

The areas that are to be fenced will be monitored in the following years of this project to evaluate results of fencing the reseeded areas. The areas of the streams that are enhanced will be monitored for regrowth of vegetation, water quality in that area, bank stabilization, and use by wildlife. These results will be recorded and entered into a database for evaluation on later projects.

Objective 3: Protect and repair natural springs

The many natural springs will be fenced to protect these vital riparian areas from trampling by domestic and wild animals as well as humans. These areas provide a source of clean, cool water to the Owyhee River and streams on the Reservation. These areas will have a small (appr. 50yd X 50yd) fence erected around the area of the spring where the water exits the ground. PVC pipes will be placed in the spring and run to a water trough to supply water for stock (domestic/wild), and to keep them from the spring. Also, many spring area have stock water ponds in the vicinity. These ponds will be inspected, evaluated, inventoried/documented, and costs for repairs assessed.

Existing springs that have had enclosure fences installed in 1999 and before, will be monitored and maintained as needed to ensure this work is providing the desired outcome (clean, cool, free flowing water).

The monitoring and evaluation of this objective will be accomplished with the assistance of the Western Shoshone-Paiute Livestock Association. These evaluations will assist us in determining which springs and stock water areas are over utilized and in need of rehabilitation, and also help in maintaining them once they have been repaired.

Objective 4: Enhance river and stream habitat

Trees and native grasses will be planted on degraded stream banks in order to help keep erosion during high water to a minimum, as well as lowering the water temperature for native trout survival. Also, these areas will be evaluated annually to determine whether the effort has been productive. The majority of the planting will occur in areas that have been fenced to exclude wild/domestic stock. Many of these trees will come from our cost sharing with the BIA.

High water has eroded many areas on the Owyhee River and some streams on the Reservation, with the planting of native grasses and trees we are hoping to protect these areas naturally without introducing big rocks and debris to the system. These areas will be monitored and evaluated much the same as the spawning areas will be monitored. We will also be using the aid of the Owyhee School district in helping monitor these areas for regrowth and water temperature. The water temperatures are expected to drop significantly in the areas of new planting. However the difference may be slight until the trees and grasses are well established.

As part of an overall objective of this project is to begin a Unified Watershed Assessment (UWA). This work was begun in 1998 with the development of “draft” water quality standards for the DVIR. These standards have been accepted by the DVIR Tribal Council and we are currently waiting for final approval from EPA. These standards include water quality information on TMDL’s, metals, temperature, DO, and other factors. Also, as part of the UWA we have collected samples of fish from the Owyhee River for analysis of metals and toxics present in these fish. The results of this test have not been received as of this writing. This information will all be included in our UWA. The Tribes will work with both Nevada and Idaho states to develop our UWA for the Owyhee River Basin. A draft UWA should be available by March 1999.

f. Methods

Task 1.1: Snorkel surveys of streams to determine species present and get baseline population estimates**

Task 1.2: Fish population estimates of the above named streams and Owyhee River. Invertebrate compositions and population estimates from same streams and River.**

Estimates will be made using the Zippin multiple pass method-or modified single pass method (to reduce injury to fish) (Mesa and Schreck 1989).

Invertebrates will be sampled using a Ponar dredge, kick screen, and plankton net.

**** Dependant on stock assessment proposal**

Task 2.1

Evaluate river and streams to determine spawning areas for fencing and rehabilitation.

Task 2.2

Fencing of spawning areas. Fencing will be erected in critical spawning areas on the streams and river of the Reservation. These areas will be monitored periodically for maintenance of fence, disturbance to redds, and bank/riparian area condition.

Task 3.1

Evaluate (with Duck Valley Cattleman's Assc.) which springs are a priority for fencing and protection.

Task 3.2

Erect enclosure fences at these springs and install gravity flow water troughs.

Task 3.3

Existing stock water ponds will be inspected and cost estimates for repairs made.

Task 3.4

Upon approval by BPA and Tribal Council, repairs will be made and ponds put back in Condition to hold water.

Task 3.5

Maintenance schedule will be set for fences, ponds, and spring areas. Schedule will include but not be limited to:

- inspection of fences and repair of broken wire or posts
- inspection of spring area and reseeding with native grasses if needed
- inspection of water pipe and water troughs - repair if necessary
- inspection of stock ponds, dam, spillway, water temps, water quality

Task 4.1

Native grasses and trees will be planted on eroded areas of the river and stream banks. This will help to maintain lower water temperatures throughout the summer months.

Task 4.2

Evaluate and monitor seeded areas for disturbance and regrowth. Annual evaluations will be done to record the progress of our efforts, and determine sections that need added planting or attention (ie. fence repair)

g. Facilities and equipment

Refer to the "umbrella project" (ShopaiGD1.doc) for a description of *facilities and equipment*.

h. Budget

This proposal is designed as a sub-proposal under the Shoshone-Paiute Tribes “umbrella project” for BPA funded fish and wildlife implementation projects on the DVIR. The personnel category is for full time project leader and one full time fishery technician and one part-time technician.

Fringe benefits are based on 30% rate and included in the personnel category.

The supplies category is for completion of the spring developments (fencing, troughs, piping) and for rental equipment to complete these projects. Also as part of this category is the cost of trees and seed for enhancement of riparian areas and totals \$80,000.00.

The O&M category is for the continued lease of two vehicles (4 wheel drive) from GSA.

The travel category is to attend pertinent resident fish manager meetings and other associated meetings with BPA projects.

The Indirect costs of 57,722 is based on 26.6% of all categories - excluding subcontracts.

The subcontract category of \$20,000 is for technical assistance in developing a Unified Watershed Assessment for the DVIR. Also, this category includes assistance in any assessments of habitat conditions and stock pond/spring conditions.

Section 9. Key personnel

Refer to the “umbrella project” (ShopaiGD1.doc) for resumes of *key personnel*. The following Sho-Pai staff and consultants will be implementing this specific sub-proposal.

Section 10. Information/technology transfer

Refer to “umbrella project” (ShopaiGD1.doc) for a description of proposed *information and technology transfer* media methods.

Congratulations!